

**WHAT IS CLAIMED IS:**

1. A method of inducing milk production in a mammal, the method comprising:  
administering to the mammal a milk-secretion stimulating amount of:
  - i) an estrogen-like agent (ELA);
  - ii) a progestational agent (PGA); and
  - iii) a somatotropin biologically active in said mammal,  
wherein the first day of treatment is designated day 0 (zero).
2. The method of 1 wherein the ELA and PGA are administered as either a single sustained-release dose or are administered for approximately 5-12 days, beginning on day zero, and wherein the somatotropin is administered for at least 20 days from day 0.
3. The method of 2 wherein the ELA is administered at a dose of approximately 0.001 to 0.1 mg/kg/day and the PGA is administered at a dose of approximately .0025 to 0.25 mg/kg/day and is administered for approximately seven days.
4. The method of 2 wherein the somatotropin is administered for at least 30 days from day 0.
5. The method of 4 wherein the somatotropin is administered on as approximately 4 doses.
6. The method of 4 wherein the somatotropin is further administered in a sustained-release dose approximately every 14 days throughout lactation.
7. The method of claim 1, further comprising administering a milk-secretion enhancing amount of a glucocorticoid.
8. The method of claim 7 wherein the glucocorticoid is administered either on approximately day 10 to day 17 of the treatment or approximately 6 days after the final ELA administration.

●

9. The method of claim 7 wherein the glucocorticoid is dexamethasone administered at a dose of approximately 0.005 to 0.5 mg/kg on approximately day 10 to day 17 of the treatment.
10. The method of claim 1, further comprising subjecting the mammal to milk-stimulating photoperiods starting on, or before, day 0.
11. The method of claim 10 wherein said photo periods:
  - a) comprise 12 consecutive hours of light and 12 consecutive hours of dark during each 24 hour period;
  - b) comprise progressively longer periods of light during each successive 24 hour period; or
  - c) comprise progressively shorter periods of light during each successive 24 hour period.
12. The method of claim 10 wherein the mammal is a seasonal breeder.
13. The method of claim 12 wherein the photoperiods are substantially identical to those of a season in which the seasonal breeder is fertile.
14. The method of claim 1 further comprising providing physical stimulation of the mammals mammary gland region at least once daily for at least 7 consecutive days, starting on approximately day 7 of the treatment.
15. The method of claim 14 wherein the mammals mammary gland region is stimulated at least three times daily.
16. The method of claim 1 wherein the mammal is a dairy heifer or a non-pregnant cow.

(b) (4)

17. A method of inducing milk production in a mammal, the method comprising:  
administering to the mammal:

- i) ELA, subcutaneously, at a dose of approximately 0.007 to 0.7 mg/kg/body weight;
- ii) PGA, subcutaneously, at a dose of approximately 0.0175 to 1.75 mg/kg/body weight/;
- iii) glucocorticoid, intramuscularly, at a dose of approximately .005-.50 mg/kg/body weight;
- iv) a somatotropin biologically active in the mammal, subcutaneously, at a dose of approximately 250-750 mg;

wherein ELA and PGA doses are each administered beginning on day 0; wherein the dexamethasone dose is administered on approximately day 10 to 17; wherein the first day of treatment is designated day 0 (zero).

18. The method of claim 17 wherein the mammal is a dairy heifer or a non-pregnant cow.

19. A method of inducing milk production in a dairy heifer or a non-pregnant cow, the method comprising administering to the heifer or cow a milk-secretion stimulating amount of:

- i) an estrogen-like agent (ELA);
- ii) a progestational agent (PGA); and
- iii) a somatotropin biologically active in the cow or heifer;

wherein the first day of treatment is designated as day 0, and wherein the somatotropin is administered for at least 20 days from day 0.

20. The method of claim 19 wherein the ELA and the PGA are administered either as a single sustained release dosage or twice daily for approximately 5-12 days and wherein and wherein the somatotropin is administered for at least 30 days from day 0.

20  
19  
18  
17  
16  
15  
14  
13  
12  
11  
10  
9  
8  
7  
6  
5  
4  
3  
2  
1

21. The method of claim 20 wherein with the ELA is 17 $\beta$ -estradiol administered on day 0, as a slow-release pellet, at a dose of approximately 0.7 mg/kg body weight, wherein the PGA is natural progesterone administered on day 0, as a slow release pellet, at a dose of approximately 1.75 mg/kg body weight; wherein the somatotropin is administered as a sustained-release pellet approximately every two weeks throughout lactation; wherein the method further comprises administering, intramuscularly, dexamethasone on day 13, at a dose of approximately 0.05 mg/kg body weight; and wherein the treatment further comprises stimulating the mammary gland of the heifer or cow at least 2 times daily for at least seven consecutive days beginning on approximately day 7.
22. A method of inducing milk production in a mammal, the method comprising:
  - a) administering to the mammal a milk-secretion stimulating amount of:
    - i) an estrogen-like agent (ELA);
    - ii) a progestational agent (PGA); and
  - b) subjecting the mammal to milk-stimulating photo periods starting on, or before, day 0;  
wherein the first day of treatment is designated day 0 (zero).
23. The method of claim 22 wherein said photo periods:
  - a) comprise 12 consecutive hours of light and 12 consecutive hours of dark during each 24 hour period;
  - b) comprise progressively longer periods of light during each successive 24 hour period; or
  - c) comprise progressively shorter periods of light during each successive 24 hour period.
24. The method of claim 23 wherein the mammal is a seasonal breeder.
25. The method of claim 24 wherein the photo periods are substantially identical to those of a season in which the seasonal breeder is fertile.